

WHAT IS CLAIMED IS:

1. A method for inhibiting aggregation of β -amyloid in a subject or disaggregating aggregated β -amyloid in a subject, comprising administering to a subject in need thereof an effective amount of a filamentous bacteriophage which displays an antibody or epitope binding fragment thereof, wherein said antibody and epitope binding fragment thereof bind to an epitope of β -amyloid so as to inhibit aggregation of β -amyloid in said subject and/or to cause disaggregation of a β -amyloid aggregate in said subject.

2. The method of claim 1, wherein said epitope of β -amyloid comprises the amino acid sequence of SEQ ID NO:1.

3. The method of claim 2, wherein said epitope is contained in a peptide having an amino acid sequence selected from the group consisting of SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:21, and SEQ ID NO:22.

4. The method of claim 1, wherein said antibody or epitope binding fragment thereof is displayed on said bacteriophage via coat glycoprotein VIII.

5. The method of claim 1, wherein said β -amyloid is selected from the group consisting of A β 39, A β 40, A β 41, A β 42 and A β 43.

6. The method of claim 1, wherein said administering is to the olfactory system of said subject.

7. A pharmaceutical composition in unit dosage form, comprising a pharmaceutically acceptable carrier and, as an active ingredient, a filamentous bacteriophage which displays an antibody or epitope binding fragment thereof, wherein said antibody and epitope binding fragment thereof bind to an epitope of β -amyloid so as to inhibit aggregation of β -amyloid in a subject and/or to cause disaggregation of a β -amyloid aggregate in a subject.

8. The pharmaceutical composition of claim 7, wherein said epitope of β -amyloid comprises the amino acid sequence of SEQ ID NO:1.

9. The pharmaceutical composition of claim 8, wherein said antibody or epitope binding fragment thereof is displayed on said bacteriophage via coat glycoprotein VIII:

10. The pharmaceutical composition of claim 8, wherein said epitope is contained in a peptide having an amino acid sequence selected from the group consisting of SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:21, and SEQ ID NO:22.

11. The pharmaceutical composition of claim 7, wherein said β -amyloid is selected from the group consisting of A β 39, A β 40, A β 41, A β 42 and A β 43.

12. A method for inhibiting aggregation of a prion protein in a subject or disaggregating aggregated prion protein in a subject comprising administering to a subject in

need thereof an effective amount of a filamentous bacteriophage which displays an antibody or epitope binding fragment thereof which binds to said prion protein so as to inhibit aggregation of said prion protein in said subject and/or to cause disaggregation of said prion protein aggregate in said subject.

13. The method of claim 12, wherein said prion protein is scrapie isoform (PrP^{Sc}).

14. The method of claim 13, wherein said antibody or fragment binds to SEQ ID NO:26.

15. The method of claim 14, wherein said antibody or fragment binds to SEQ ID NO:26 in a peptide comprising SEQ ID NO:26.

16. The method of claim 15, wherein said peptide is SEQ ID NO:25.

17. The method of claim 12, wherein said antibody or epitope binding fragment thereof is displayed via coat glycoprotein VIII on said bacteriophage.

18. The method of claim 12, wherein said antibody is selected from the group consisting of mAb 3-11 and mAb 2-40.

19. An antibody or epitope binding fragment thereof which binds to a prion protein so as to inhibit aggregation of

said prion protein and/or to cause disaggregation of said prion protein aggregate.

20. The antibody or epitope binding fragment thereof of claim 19, wherein said prion protein is scrapie isoform (PrP^{Sc}).

21. The antibody or epitope binding fragment thereof of claim 20, wherein said antibody or epitope binding fragment binds to SEQ ID NO:26.

22. The antibody or epitope binding fragment thereof of claim 21, wherein said antibody or epitope binding fragment binds to SEQ ID NO:26 in a peptide comprising SEQ ID NO:26.

23. The antibody or epitope binding fragment thereof of claim 22, wherein said peptide is SEQ ID NO:25.

24. The antibody of claim 19, which is selected from the group consisting of mAb 3-11 and mAb 2-40.